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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/737,104

12/16/2003

Yi Luo

74435

5488

27377

7590

05/25/2006

MACMILLAN, SOBANSKI & TODD, LLC
ONE MARITIME PLAZA-FOURTH FLOOR
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TOLEDO, OH 43604

EXAMINER

ISSING, GREGORY C

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,104

Applicant(s)

LUO ET AL.

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 and 3-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sari et al (6,791,477) in view of Lau (5,883,594), Sheynblat (6,720,915), and either one of Ayed (6,407,698) or Brust et al (6,650,999).
3. Sari et al teach a method and apparatus for a vehicle locating system a vehicle-mounted location unit 16 that receives GPS data from GPS satellites for determining vehicle location data and a portable key fob 10 (2:4-10) which, as shown in Figure 8, includes (1) a second GPS receiver 94 that operates upon user pressing of button inputs, (2) a transceiver/modem 118/120/22 for bi-directional data transfer communication with other devices (2:12-14 and 28-31), (3) compass 114 for providing directional information, and (4) a display 50 for providing directional indications to a waypoint. The intended use of the waypoint information and position information is to provide the user with directional bearing indications to navigate from the instant position to the waypoint associated with the vehicle, as well as other waypoints.
4. Sari et al differ from the claimed subject matter since the provision of assistance data is not taught and the provision of remote processing is not taught.
5. Lau teaches, in the portable GPS environment, the provision of transmitting assistance data to a portable GPS receiver which provides the advantage of reducing power consumption and increasing the speed for a first fix by using GPS information provided by a message system associated with another GPS receiver instead of reading the GPS information in the GPS signal (2:34-49). The assistance data includes satellite visibility, health and ephemeris data (2:1-7 and 4:26-40).
6. Sheynblat also teaches, in the portable GPS environment, the provision of transmitting assistance data to a portable GPS receiver in what is known as wireless assisted GPS (WAG) to achieve performance improvements for faster acquisition wherein the assistance data may include an ordered set of satellites to be searched, estimated time of arrival of these signals and the expected frequency (Doppler) of the signals (9:50-10:18).

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7. Each of Ayed and Brust et al teach the conventionality of remote processing of bearing information in a vehicle locator system. Specifically, Ayed teaches, in a vehicle locator environment, a vehicle locator wherein it is known to (1) determine the current location and heading, (2) retrieve parked vehicle location, (3) determine the relative distance and bearing to the parked vehicle location from the current location, and (4) conveying the relative distance and bearing to the user (4:63-5:4). Additionally, it is taught that an alternative known embodiment includes the determination of bearing and distance being performed remotely from the portable device 12 (5:15-23). Specifically, Brust et al teach, in a vehicle locator environment, remote processing of route determination information in response to the mobile terminal's position data and stored waypoint data associated with a parked vehicle (10:37-49). The determination of route information inherently includes bearing information.

8. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sari et al by providing assistance data to the portable key fob from a separate GPS receiver in view of the teachings of either one of Lau and Sheynblat et al who teach the conventionality of providing assistance data in a portable GPS navigation device in order to reduce power consumption. In light of the fact that the vehicle of Sari et al includes a GPS receiver connected to a substantially greater power source, i.e., the vehicle battery, and which is operating prior to the portable device's operation, the vehicle GPS receiver would clearly have the required assistance data available thereat. The combined teachings of Lau and Shenyblat et al teach the claimed components for the assistance data including the claimed ephemeris data, clock data, and Doppler data. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Sari et al by determining the bearing data between the fob location data and the vehicle location data remotely from the portable key fob location in view of the teachings of either one of Ayed or Brust et al in light of the fact that it is merely a conventional alternative embodiment which would reduce the processing requirements in the portable device and thus reduce the power requirements of the portable key fob, which obviously includes a small power source. Obviously, if not inherently, the RF transceiver of Sari et al receives transmissions from any transmitter, including that which it is communicating with, when it is "within reception range" of a transmitter.

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9. Applicants argue “the specific types of data sharing between a vehicle-mounted location unit and a portable fob are entirely lacking from the combination.” Applicants argue “units that employ waypoints . . . to provide directions to a vehicle . . . rely on the vehicle not moving . . .” and therefore the combination lacks any suggestion of sharing location data between the vehicle unit and the portable fob while returning to the vehicle. Applicants also argue that the combination fails to suggest transmission of vehicle determined bearing data to the portable fob. Lastly, applicants argue that the claims have been amended to recite communication between the receivers when within the reception range of the first local transceiver, i.e. the vehicle mounted transceiver.

10. The applicants’ arguments have been considered but are not deemed to be persuasive. Regarding the alleged lack of teaching for the specific types of data shared, the argument is not convincing because each of Lau and Sheynblat disclose the sharing of aiding/assistance data to low-power portable GPS device from a reference GPS device having a greater power source. Moreover, Sari et al use the transceiver to transfer GPS data with other locator circuits. Thus, the provision of aiding/assistance data to a fob, which is clearly a low power portable device, from the vehicle GPS receiver of Sari et al, which equates to a reference station, is clearly suggested to the skilled artisan in view of the teachings of either one of Lau or Sheynblat. Likewise the sharing of data from the fob to the vehicle-mounted transceiver including the determination of bearing data is shown by each of Ayed and Brust et al who clearly teach such and wherein the obviousness of such is made clear via the fact that the processing and mapping are not required in the portable device and thus reduces the size and power consumption of the low-power portable fob. Applicants’ arguments regarding employment of waypoints and the reliance on moving is neither germane to any claim limitations nor an accurate interpretation of the prior art since for example, each time the button “F” is pressed, new bearing data is provided based on the current instantaneous position of the fob. Regarding the alleged lack of teaching to transmit bearing data to the portable fob, the applicants’ argument is not convincing since each of Brust et al and Ayed are cited for the express purpose of remotely processing GPS data from a portable device to determine bearing information, see specifically cited portions above. Applicants’ argument that the amendments to the claims regarding “communication . . . when within reception range” overcome the

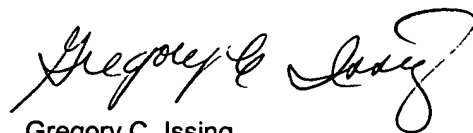
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prior art is not convincing because it is obvious, if not inherent, that communication is only possible when within reception range of a transmitter. Moreover, there is nothing in any of the references to suggest that the communications do not operate in a like fashion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory C. Issing
Primary Examiner
Art Unit 3662

gci